

RAW SEQUENCE LISTING

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Application Serial Number: 10/573,130B
Source: IFWP
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IFWP

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/573,130B

DATE: 12/01/2006

TIME: 14:16:00

Input Set : A:\Replacement Sequence List-13111-00035-US.txt
 Output Set: N:\CRF4\12012006\J573130B.raw

3 <110> APPLICANT: Sturmer, Rainer
 4 Kesseler, Maria
 5 Hauer, Bernhard
 6 Friedrich, Thomas
 7 Breuer, Michael
 9 <120> TITLE OF INVENTION: Methods for the production of
 10 3-methylamino-1-(thiene-2-yl)-propane-1-ol
 12 <130> FILE REFERENCE: 13111-00035-US
 14 <140> CURRENT APPLICATION NUMBER: US/10/573,130B
 15 <141> CURRENT FILING DATE: 2006-03-23
 17 <150> PRIOR APPLICATION NUMBER: PCT/EP2004/010939
 18 <151> PRIOR FILING DATE: 2004-09-30
 20 <150> PRIOR APPLICATION NUMBER: DE 103 45 772.0
 21 <151> PRIOR FILING DATE: 2003-10-01
 23 <160> NUMBER OF SEQ ID NOS: 44
 25 <170> SOFTWARE: PatentIn version 3.3
 28 <210> SEQ ID NO: 1
 30 <211> LENGTH: 47
 32 <212> TYPE: PRT
 34 <213> ORGANISM: Lactobacillus brevis
 37 <400> SEQUENCE: 1
 39 Met Ser Asn Arg Leu Asp Gly Lys Val Ala Ile Val Thr Gly Gly Thr
 40 1 5 10 15
 43 Leu Gly Ile Gly Leu Ala Ile Ala Thr Lys Phe Val Glu Glu Gly Ala
 44 20 25 30
 47 Lys Val Met Ile Thr Gly Arg His Ser Asp Val Gly Glu Lys Ala
 48 35 40 45
 51 <210> SEQ ID NO: 2
 53 <211> LENGTH: 18
 55 <212> TYPE: PRT
 57 <213> ORGANISM: Candida magnoliae
 60 <400> SEQUENCE: 2
 62 Ser Asn Ala Leu Val Thr Gly Gly Ser Arg Val Ile Gly Ala Gly Gly
 63 1 5 10 15
 66 Phe Ile
 70 <210> SEQ ID NO: 3
 72 <211> LENGTH: 756
 74 <212> TYPE: DNA
 76 <213> ORGANISM: Lactobacillus brevis
 79 <220> FEATURE:
 81 <221> NAME/KEY: CDS
 83 <222> LOCATION: (1)..(756)
 86 <400> SEQUENCE: 3

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87 atg tct aac cgt ttg gat gga aaa gta gca atc gtt aca ggt ggt acg	48
88 Met Ser Asn Arg Leu Asp Gly Lys Val Ala Ile Val Thr Gly Gly Thr	
89 1 5 10 15	
91 ttg ggt atc ggt tta gct atc gcc acg aag ttc gtt gaa gaa ggg gct	96
92 Leu Gly Ile Gly Leu Ala Ile Ala Thr Lys Phe Val Glu Glu Gly Ala	
93 20 25 30	
95 aag gtc atg att acc ggc cgg cac acg gat gtt ggt gaa aaa gca gct	144
96 Lys Val Met Ile Thr Gly Arg His Ser Asp Val Gly Glu Lys Ala Ala	
97 35 40 45	
99 aag agt gtc ggc act cct gat cag att caa ttt ttc caa cat gat tct	192
100 Lys Ser Val Gly Thr Pro Asp Gln Ile Gln Phe Phe Gln His Asp Ser	
101 50 55 60	
103 tcc gat gaa gac ggc tgg acg aaa tta ttc gat gca acg gaa aaa gcc	240
104 Ser Asp Glu Asp Gly Trp Thr Lys Leu Phe Asp Ala Thr Glu Lys Ala	
105 65 70 75 80	
107 ttt ggc cca gtt tct aca tta gtt aat aac gct ggg atc gcg gtt aac	288
108 Phe Gly Pro Val Ser Thr Leu Val Asn Asn Ala Gly Ile Ala Val Asn	
109 85 90 95	
111 aag agt gtc gaa gaa acc acg act gct gaa tgg cgt aaa cta tta gcc	336
112 Lys Ser Val Glu Glu Thr Thr Ala Glu Trp Arg Lys Leu Leu Ala	
113 100 105 110	
115 gtc aac ctt gat ggt gtc ttc ttc ggt acc cga tta ggg att caa cgg	384
116 Val Asn Leu Asp Gly Val Phe Phe Gly Thr Arg Leu Gly Ile Gln Arg	
117 115 120 125	
119 atg aag aac aaa ggc tta ggg gct tcc atc atc aac atg tct tcg atc	432
120 Met Lys Asn Lys Gly Leu Gly Ala Ser Ile Ile Asn Met Ser Ser Ile	
121 130 135 140	
123 gaa ggc ttt gtg ggt gat cct agc tta ggg gct tac aac gca tct aaa	480
124 Glu Gly Phe Val Gly Asp Pro Ser Leu Gly Ala Tyr Asn Ala Ser Lys	
125 145 150 155 160	
127 ggg gcc gta cgg att atg tcc aag tca gct gcc tta gat tgt gcc cta	528
128 Gly Ala Val Arg Ile Met Ser Lys Ser Ala Ala Leu Asp Cys Ala Leu	
129 165 170 175	
131 aag gac tac gat gtt cgg gta aac act gtt cac cct ggc tac atc aag	576
132 Lys Asp Tyr Asp Val Arg Val Asn Thr Val His Pro Gly Tyr Ile Lys	
133 180 185 190	
135 aca cca ttg gtt gat gac cta cca ggg gcc gaa gaa gcg atg tca caa	624
136 Thr Pro Leu Val Asp Asp Leu Pro Gly Ala Glu Glu Ala Met Ser Gln	
137 195 200 205	
139 cgg acc aag acg cca atg ggc cat atc ggt gaa cct aac gat att gcc	672
140 Arg Thr Lys Thr Pro Met Gly His Ile Gly Glu Pro Asn Asp Ile Ala	
141 210 215 220	
143 tac atc tgt gtt tac ttg gct tct aac gaa tct aaa ttt gca acg ggt	720
144 Tyr Ile Cys Val Tyr Leu Ala Ser Asn Glu Ser Lys Phe Ala Thr Gly	
145 225 230 235 240	
147 tct gaa ttt gta gtt gac ggt ggc tac act gct caa	756
148 Ser Glu Phe Val Val Asp Gly Gly Tyr Thr Ala Gln	
149 245 250	
152 <210> SEQ ID NO: 4	

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Input Set : A:\Replacement Sequence List-13111-00035-US.txt
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154 <211> LENGTH: 252
 156 <212> TYPE: PRT
 158 <213> ORGANISM: Lactobacillus brevis
 161 <400> SEQUENCE: 4
 163 Met Ser Asn Arg Leu Asp Gly Lys Val Ala Ile Val Thr Gly Gly Thr
 164 1 5 10 15
 167 Leu Gly Ile Gly Leu Ala Ile Ala Thr Lys Phe Val Glu Glu Gly Ala
 168 20 25 30
 171 Lys Val Met Ile Thr Gly Arg His Ser Asp Val Gly Glu Lys Ala Ala
 172 35 40 45
 175 Lys Ser Val Gly Thr Pro Asp Gln Ile Gln Phe Phe Gln His Asp Ser
 176 50 55 60
 179 Ser Asp Glu Asp Gly Trp Thr Lys Leu Phe Asp Ala Thr Glu Lys Ala
 180 65 70 75 80
 183 Phe Gly Pro Val Ser Thr Leu Val Asn Asn Ala Gly Ile Ala Val Asn
 184 85 90 95
 187 Lys Ser Val Glu Glu Thr Thr Ala Glu Trp Arg Lys Leu Leu Ala
 188 100 105 110
 191 Val Asn Leu Asp Gly Val Phe Phe Gly Thr Arg Leu Gly Ile Gln Arg
 192 115 120 125
 195 Met Lys Asn Lys Gly Leu Gly Ala Ser Ile Ile Asn Met Ser Ser Ile
 196 130 135 140
 199 Glu Gly Phe Val Gly Asp Pro Ser Leu Gly Ala Tyr Asn Ala Ser Lys
 200 145 150 155 160
 203 Gly Ala Val Arg Ile Met Ser Lys Ser Ala Ala Leu Asp Cys Ala Leu
 204 165 170 175
 207 Lys Asp Tyr Asp Val Arg Val Asn Thr Val His Pro Gly Tyr Ile Lys
 208 180 185 190
 211 Thr Pro Leu Val Asp Asp Leu Pro Gly Ala Glu Glu Ala Met Ser Gln
 212 195 200 205
 215 Arg Thr Lys Thr Pro Met Gly His Ile Gly Glu Pro Asn Asp Ile Ala
 216 210 215 220
 219 Tyr Ile Cys Val Tyr Leu Ala Ser Asn Glu Ser Lys Phe Ala Thr Gly
 220 225 230 235 240
 223 Ser Glu Phe Val Val Asp Gly Gly Tyr Thr Ala Gln
 224 245 250
 227 <210> SEQ ID NO: 5
 229 <211> LENGTH: 472
 231 <212> TYPE: DNA
 233 <213> ORGANISM: Candida magnoliae
 236 <220> FEATURE:
 238 <221> NAME/KEY: CDS
 240 <222> LOCATION: (1)..(471)
 243 <400> SEQUENCE: 5
 244 aac gcg ctg gtg acg ggc ggc agc cgc ggc att ggc gaa gcc act gcc 48
 245 Asn Ala Leu Val Thr Gly Gly Ser Arg Gly Ile Gly Glu Ala Thr Ala
 246 1 5 10 15
 248 att aag ctc gcc gag gag ggc tac agc gtc acg att gcg tct cgc ggc 96
 249 Ile Lys Leu Ala Glu Glu Gly Tyr Ser Val Thr Ile Ala Ser Arg Gly

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Input Set : A:\Replacement Sequence List-13111-00035-US.txt
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250	20	25	30	
252	ctt aag cag ctc gag gct gtg aag gcc aaa cta ccc att	gtg aag cag		144
253	Leu Lys Gln Leu Glu Ala Val Lys Ala Lys Leu Pro Ile Val Lys Gln			
254	35	40	45	
256	gga cag gtt cac cac gtg tgg cag ctt gat ctc agt gat gtc gac gct			192
257	Gly Gln Val His His Val Trp Gln Leu Asp Leu Ser Asp Val Asp Ala			
258	50	55	60	
260	gcg gcc gcc ttc aaa ggg tcg ccg cta cct gcc agc cgc tac gac gtg			240
261	Ala Ala Ala Phe Lys Gly Ser Pro Leu Pro Ala Ser Arg Tyr Asp Val			
262	65	70	75	80
264	ctc gtc agc aat gct ggc gtg gcc cag ttt agc ccg ttc atc gag cat			288
265	Leu Val Ser Asn Ala Gly Val Ala Gln Phe Ser Pro Phe Ile Glu His			
266	85	90	95	
268	gcg aag cag gac tgg tcg cag atg ctt gcc atc aat ctg gcg gca ccc			336
269	Ala Lys Gln Asp Trp Ser Gln Met Leu Ala Ile Asn Leu Ala Ala Pro			
270	100	105	110	
272	att gcg ctg gcc cag aca ttt gct aag gcc att ggc gac aag ccg cgc			384
273	Ile Ala Leu Ala Gln Thr Phe Ala Lys Ala Ile Gly Asp Lys Pro Arg			
274	115	120	125	
276	aac aca ccg gcc cac att gtg ttt gtc tcg tcg aac gtc tcg ttg cga			432
277	Asn Thr Pro Ala His Ile Val Phe Val Ser Ser Asn Val Ser Leu Arg			
278	130	135	140	
280	ggc ttc ccg aac atc ggc gtc aac tcc atc acc ccc ggc a			472
281	Gly Phe Pro Asn Ile Gly Val Asn Ser Ile Thr Pro Gly			
282	145	150	155	
285	<210> SEQ ID NO: 6			
287	<211> LENGTH: 157			
289	<212> TYPE: PRT			
291	<213> ORGANISM: Candida magnoliae			
294	<400> SEQUENCE: 6			
296	Asn Ala Leu Val Thr Gly Gly Ser Arg Gly Ile Gly Glu Ala Thr Ala			
297	1	5	10	15
300	Ile Lys Leu Ala Glu Glu Gly Tyr Ser Val Thr Ile Ala Ser Arg Gly			
301	20	25	30	
304	Leu Lys Gln Leu Glu Ala Val Lys Ala Lys Leu Pro Ile Val Lys Gln			
305	35	40	45	
308	Gly Gln Val His His Val Trp Gln Leu Asp Leu Ser Asp Val Asp Ala			
309	50	55	60	
312	Ala Ala Ala Phe Lys Gly Ser Pro Leu Pro Ala Ser Arg Tyr Asp Val			
313	65	70	75	80
316	Leu Val Ser Asn Ala Gly Val Ala Gln Phe Ser Pro Phe Ile Glu His			
317	85	90	95	
320	Ala Lys Gln Asp Trp Ser Gln Met Leu Ala Ile Asn Leu Ala Ala Pro			
321	100	105	110	
324	Ile Ala Leu Ala Gln Thr Phe Ala Lys Ala Ile Gly Asp Lys Pro Arg			
325	115	120	125	
328	Asn Thr Pro Ala His Ile Val Phe Val Ser Ser Asn Val Ser Leu Arg			
329	130	135	140	
332	Gly Phe Pro Asn Ile Gly Val Asn Ser Ile Thr Pro Gly			

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Input Set : A:\Replacement Sequence List-13111-00035-US.txt
Output Set: N:\CRF4\12012006\J573130B.raw

333 145 150 155
337 <210> SEQ ID NO: 7
338 <211> LENGTH: 27
339 <212> TYPE: DNA
340 <213> ORGANISM: Artificial sequence
342 <220> FEATURE:
343 <223> OTHER INFORMATION: Primer: Mke 338
345 <400> SEQUENCE: 7
346 ggaaattcca tatgtctaac cgtttgg 27
349 <210> SEQ ID NO: 8
350 <211> LENGTH: 28
351 <212> TYPE: DNA
352 <213> ORGANISM: Artificial sequence
354 <220> FEATURE:
355 <223> OTHER INFORMATION: Primer: Mke 339
357 <400> SEQUENCE: 8
358 ctagggaag cttattgagc agtgtagc 28
361 <210> SEQ ID NO: 9
362 <211> LENGTH: 28
363 <212> TYPE: DNA
364 <213> ORGANISM: Artificial sequence
366 <220> FEATURE:
367 <223> OTHER INFORMATION: Primer: Mke 366
369 <400> SEQUENCE: 9
370 acgacgacga gcaacgcbct bgtbacgg 28
373 <210> SEQ ID NO: 10
374 <211> LENGTH: 28
375 <212> TYPE: DNA
376 <213> ORGANISM: Artificial sequence
378 <220> FEATURE:
379 <223> OTHER INFORMATION: Primer: Mke 367
381 <400> SEQUENCE: 10
382 acgacgacgt cgaacgcbct bgtbacgg 28
385 <210> SEQ ID NO: 11
386 <211> LENGTH: 27
387 <212> TYPE: DNA
388 <213> ORGANISM: Artificial sequence
390 <220> FEATURE:
391 <223> OTHER INFORMATION: Primer: Mke 374
393 <400> SEQUENCE: 11
394 gccgggttg atsswgttsa cgccgat 27
397 <210> SEQ ID NO: 12
398 <211> LENGTH: 10
399 <212> TYPE: PRT
400 <213> ORGANISM: Lactobacillus brevis
403 <220> FEATURE:
404 <221> NAME/KEY: MISC_FEATURE
405 <222> LOCATION: (1)..(10)
406 <223> OTHER INFORMATION: Fragment: C terminus

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 12/01/2006
PATENT APPLICATION: US/10/573.130B TIME: 14:16:01

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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:15; Xaa Pos. 47,48,53,59,60
Seq#:16; Xaa Pos. 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,19,20
Seq#:17; Xaa Pos. 12,13,14,15
Seq#:18; Xaa Pos. 8
Seq#:19; Xaa Pos. 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15
Seq#:20; Xaa Pos. 1,2,3,4
Seq#:21; Xaa Pos. 1,2,4,5,7
Seq#:22; Xaa Pos. 6,10,11,12,13,14,15
Seq#:23; Xaa Pos. 1,3,4,5,6,7,8,9,11,12,13,14,15,16,17,18
Seq#:24; Xaa Pos. 6,10,11,12,13,14,15,16,17
Seq#:25; Xaa Pos. 16,17,18,19,20
Seq#:26; Xaa Pos. 1,3
Seq#:27; Xaa Pos. 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15
Seq#:28; Xaa Pos. 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20
Seq#:29; Xaa Pos. 1,2,3,4,5,7,8,9,10,11,12,13,15,16,17,18,19,20,21,23,24
Seq#:30; Xaa Pos. 1,2,5,10,11,12,13,14,15,16,17,18,19,20
Seq#:31; Xaa Pos. 1,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19
Seq#:32; Xaa Pos. 1,2,3,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,29,30
Seq#:33; Xaa Pos. 5,6,7,8,9,10
Seq#:34; Xaa Pos. 1,2,3,4,5,6,8,9,13,14,15,16,17,18,19,20
Seq#:35; Xaa Pos. 11,12,13,14
Seq#:36; Xaa Pos. 1,2,24,30
Seq#:39; Xaa Pos. 1,3,5,6,7,8
Seq#:40; Xaa Pos. 1,2,3,4,5,14,15,19,20,22
Seq#:41; Xaa Pos. 2,39,40
Seq#:42; Xaa Pos. 3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,25,27
Seq#:42; Xaa Pos. 37,38,39
Seq#:43; Xaa Pos. 12,13,14,15
Seq#:44; Xaa Pos. 1,4,5,6,7,8,9,11,12,13,14,15

VERIFICATION SUMMARY

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Input Set : A:\Replacement Sequence List-13111-00035-US.txt
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L:492 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:32
L:496 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:48
L:592 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:0
L:596 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:16
L:617 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:0
L:634 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:0
L:705 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:0
L:737 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:0
L:775 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 after pos.:0
L:801 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:0
L:898 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 after pos.:0
L:902 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 after pos.:16
L:924 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:0
L:928 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:16
L:945 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:0
L:949 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:16
L:971 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:0
L:1058 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:0
L:1155 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:0
L:1159 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:16
L:1280 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:0
L:1284 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:16
L:1321 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 after pos.:0
L:1325 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 after pos.:16
L:1431 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 after pos.:0
L:1435 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 after pos.:16
L:1551 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:0
L:1555 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:16
L:1572 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33 after pos.:0
L:1633 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34 after pos.:0
L:1637 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34 after pos.:16
L:1654 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:35 after pos.:0
L:1686 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36 after pos.:0
L:1690 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36 after pos.:16
L:1754 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:39 after pos.:0
L:1816 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:40 after pos.:0
L:1820 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:40 after pos.:16
L:1846 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41 after pos.:0
L:1854 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41 after pos.:32
L:1980 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42 after pos.:0
L:1984 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42 after pos.:16
L:1988 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42 after pos.:32
L:2005 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43 after pos.:0
L:2067 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44 after pos.:0